

RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 2811

PATENT APPLICATION
Do. No. 5484-48

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

FAX COPY RECEIVED

In re application of: Byung-Sup SHIM, et al.

APR 12 2002

Serial No. 09/305,240

Examiner: Nadav. Ori

TECHNOLOGY CENTER 2800

Filed: May 4, 1999

Group Art Unit: 2811

For: **OPEN DRAIN INPUT/OUTPUT STRUCTURE AND MANUFACTURING
METHOD THEREOF IN SEMICONDUCTOR DEVICE**

BOX AF

Assistant Commissioner for Patents
Washington, D.C. 20231

AMENDMENT AFTER FINAL REJECTION UNDER 37 CFR 1.116

Responsive to the Final Office Action, dated February 13, 2002, please amend the application as follows.

IN THE CLAIMS

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5. (Twice Amended) A pull-up transistor disposed between a Vdd terminal and an I/O pad of a semiconductor device comprising:

- a semiconductor substrate of a first conductive-type;
- a source region and a drain region of a second conductive type formed in the substrate and defining between them a channel region, one of the source region and the drain region being electrically coupled to the I/O pad, the other one of the source region and the drain region being electrically coupled to the Vdd terminal;
- an impurity implantation region of impurities of a second conductive-type formed in a first sector of the channel region, the first sector not reaching either one of the source region and the drain region;
- the impurity implantation region of the first sector comprising a surface region operable under field effect as a depletion channel;